# SECURITIES AND EXCHANGE COMMISSION (Release No. 34-65987; File No. SR-BX-2011-084)

December 16, 2011

Self-Regulatory Organizations; NASDAQ OMX BX, Inc.; Notice of Filing of Proposed Rule Change Relating to Amending the BOX Trading Rules to Reduce the PIP From One Second to 100 Milliseconds

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on December 7, 2011, NASDAQ OMX BX, Inc. (the "Exchange") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

# I. <u>Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule</u> Change

The Exchange proposes to amend Chapter V, Section 18 (The Price Improvement Period

("PIP")) of the Rules of the Boston Options Exchange Group, LLC ("BOX") to reduce the PIP from one second to 100 milliseconds. The text of the proposed rule change is available from the principal office of the Exchange, at the Commission's Public Reference Room and also on the Exchange's Internet website at http://nasdaqomxbx.cchwallstreet.com/NASDAQOMXBX/Filings/.

# II. <u>Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the</u> <u>Proposed Rule Change</u>

In its filing with the Commission, the self-regulatory organization included statements

concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places

<sup>&</sup>lt;sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>&</sup>lt;sup>2</sup> 17 CFR 240.19b-4.

specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

- A. <u>Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for,</u> <u>the Proposed Rule Change</u>
  - 1. Purpose

The purpose of the proposed rule change is to amend Chapter V, Section 18(e)(i) (The Price Improvement Period ("PIP")) of the BOX Rules to reduce the time period of the PIP from one second to 100 milliseconds (1/10 of one second). The PIP allows BOX Options Participants to designate certain customer orders for price improvement and submit such orders to the PIP ("PIP Order") with a matching contra order ("Primary Improvement Order"). Once such an order is submitted, BOX commences a PIP by broadcasting a message to Options Participants that (1) states that a Primary Improvement Order has been processed; (2) contains information concerning series, size, PIP Start Price and side of the market of the order; and (3) states when the PIP will conclude ("PIP Broadcast"). Further, responses within a PIP (i.e., Improvement Orders), are also broadcast to BOX Options Participants. This proposed rule change would reduce the duration of the PIP from one second to 100 milliseconds. When approving previous reductions in BOX exposure periods (e.g., crossing orders and the PIP) the Commission concluded that reducing these time periods to one second was fully consistent with the BOX electronic market.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> <u>See</u> Securities Exchange Act Release Nos. 53854 (May 24, 2006), 71 FR 30975 (May 31, 2006) (SR-BSE-2006-23) and 59638 (March 27, 2009), 74 FR 15020 (April 2, 2009) (BX-2009-015).

BOX is not proposing any change to the requirement in Chapter V, Section 17 of the BOX Rules that requires an Order Flow Provider ("OFP") to expose its customer's order on the BOX Book for at least one second before executing its own principal order against such customer order. An exception to this requirement to expose a customer order for one second is provided in Chapter V, Section 18(c) of the BOX Rules, permitting an OFP to execute its principal order against an order it represents as agent if the OFP submits the agency order to the PIP. BOX believes this exception for PIP orders is appropriate because the customer order is guaranteed an execution at the National Best Bid/Offer ("NBBO") or a better price through the PIP. Additionally, BOX Options Participants are informed about the two-sided order starting the PIP through receipt of the PIP Broadcast. BOX Participants have the opportunity to compete for participation in the execution of the customer order by responding to the PIP Broadcast with their best-priced Improvement Order.

BOX believes the proposed rule change could provide more customer orders an opportunity for price improvement because it will reduce the market risk for all Participants executing trades in the PIP. BOX Participants that initiate a PIP ("Initiating Participants") are required to guarantee an execution at the NBBO or at a better price, and are subject to market risk while their PIP Order is exposed to other BOX Participants. While other PIP Participants are also subject to market risk, those providing responses in the PIP through Improvement Orders are not permitted to cancel their orders, but can only modify their Improvement Order, including reducing their order quantity, by providing a better price. When a PIP Participant submits more than one Improvement Order during a PIP, doing so decreases the time that each Improvement Order is exposed to market risk. BOX believes that the Initiating Participant acts in a critical role in the PIP. Their willingness to guarantee the customer order an execution at

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NBBO or a better price is the keystone to the customer order gaining the opportunity for price improvement. As such, BOX believes that reducing the PIP from one second to 100 milliseconds, and the Participants' corresponding market risk, particularly the risk for the Initiating Participant, will benefit customers because it is more likely that additional PIP transactions will be initiated.

BOX believes that its Options Participants operate electronic systems that enable them to react and respond to orders in a meaningful way in fractions of a second. BOX anticipates that its Participants will continue to compete within the proposed PIP duration of 100 milliseconds. In particular, BOX believes that 100 milliseconds will continue to provide market participants with sufficient time to respond to, compete for, and provide price improvement for orders, and will provide investors and other market participants with more timely executions, and reduce their market risk.

BOX believes that further reducing the PIP from one second to 100 milliseconds will benefit Participants trading in the PIP. BOX believes it is in these Participants' best interests to minimize the PIP while continuing to allow Participants adequate time to electronically respond. Both the order being exposed and Participants' Improvement Orders are subject to market risk during the PIP. While a limited number of Participants wait to respond until later in the PIP, presumably to minimize their market risk, in more than eighty percent (80%) of PIP executions BOX Participants respond within the first 100 milliseconds.<sup>4</sup> BOX believes that 100 milliseconds will continue to provide all market participants with sufficient time to respond, compete, and provide price improvement for orders and will provide investors and other market participants with more timely executions, thereby reducing their market risk.

<sup>4</sup> Based on a BOX review of all PIP executions from May through July 2011 and a sample of PIP transactions from September through November 2010.

In consideration of this proposed rule change, BOX recently distributed a survey to all BOX Participants that have participated in the PIP in 2011. To substantiate that BOX Participants can receive, process, and communicate a response to a BOX PIP Broadcast within 100 milliseconds, the survey asked Participants to identify (i) how many milliseconds it takes for a PIP Broadcast to reach Participant systems; (ii) how many milliseconds it takes their systems to generate a PIP Broadcast response; (iii) how many milliseconds it takes their PIP Broadcast response to reach BOX; and (iv) whether or not a reduction of the PIP to 100 milliseconds would impair Options Participants' ability to compete for orders in the BOX PIP. All of the Participants that responded to the specific timing questions in this survey indicated that they can receive, process, and communicate multiple PIP Broadcast responses back to BOX within substantially less than 100 milliseconds.<sup>5</sup> Also in consideration of this proposed rule change, BOX reviewed all PIP executions by its Participants for the three month period of May through July 2011. This review of PIP transaction executions indicates that approximately eighty-five percent (85%) of Improvement Orders that are executed at the conclusion of a PIP were submitted within 100 milliseconds of the initial PIP Order. Additionally, approximately seventyeight percent (78%) of Improvement Orders executed at the end of the PIP were submitted in less than 10 milliseconds, and seventy percent (70%) were submitted in less than 5 milliseconds. Through the survey BOX conducted, BOX confirmed that those Participants whose PIP Broadcast responses currently average greater than 100 milliseconds do operate sufficiently automated electronic systems to enable them to react and respond to multiple PIP Broadcasts within 100 milliseconds. Based on the responses received, BOX confirmed that it typically takes

<sup>&</sup>lt;sup>5</sup> Fourteen of sixteen firms responded to the survey. Nine firms responded to the specific timing questions.

a message less than ten milliseconds to travel each way between BOX and its Participants.<sup>6</sup> Participants confirm that it typically takes not more than five milliseconds for Participant systems to process PIP Broadcast information and generate a response.<sup>7</sup> If it takes less than 10 milliseconds for a PIP Broadcast to reach a Participant's system, less than 5 milliseconds for the Participant system to process the message and generate a response, and then less than 10 milliseconds for that response to travel back to BOX, it is generally less than 25 milliseconds from the time BOX sends a PIP Broadcast to the time BOX receives a Participant's response (in the form of an Improvement Order) to that Broadcast. If it takes less than 25 milliseconds for a Participant to receive and respond to a PIP Broadcast, then a single Participant could receive and respond to four iterations of PIP messages within 100 milliseconds. Accordingly, BOX believes that 100 milliseconds will continue to provide all market participants with sufficient time to respond, compete, and provide price improvement for orders and will provide investors and other market participants with more timely executions, thereby reducing their market risk. The 85% of Improvement Orders executed at the end of the PIP that were received within 100 milliseconds of the PIP Order also demonstrates the speed of Participant systems. BOX's review of PIP transactions and the BOX survey results indicate that Participants can receive, process, and respond to a PIP Broadcast and multiple Improvement Orders while trading within a BOX PIP of 100 milliseconds.

Moreover, Supplementary Material .02 to Chapter V, Section 18 provides that a PIP will not run simultaneously with or overlap another PIP in any manner. Because the PIP currently

<sup>&</sup>lt;sup>6</sup> All Participants responding to the specific timing questions confirm that it typically takes a message less than ten milliseconds to travel each way between BOX and their system.

<sup>&</sup>lt;sup>7</sup> Six of nine Participants responding to the specific timing questions confirm that it typically takes not more than five milliseconds for them to process PIP Broadcast information and generate a response.

lasts for one second, Options Participants are unable to initiate another PIP during the one second that the PIP occurs, and BOX rejects PIP Orders during this one second. By reducing the PIP to 100 milliseconds and thereby decreasing the likelihood that a PIP is underway, and the resulting PIP Order rejection, BOX believes that it is likely that the number of PIP transactions will increase.<sup>8</sup> The PIP has saved investors more than \$350 million versus the prevailing NBBO since 2004, a monthly average of more than \$3.5 million. BOX believes that reducing the PIP duration will result in additional PIP transactions, and thus, in customers having a greater opportunity to benefit from price improvement.

Based on current PIP related market data and the BOX Participant survey, BOX believes that reducing the PIP from one second to 100 milliseconds would not impair Participants' ability to compete in the PIP.<sup>9</sup> More than sixty-five percent of PIP auctions include competition for execution (i.e., at least one other Options Participant competes with the Initiating Participant for execution of a customer order).<sup>10</sup> Additionally, almost fifty percent of all PIP auctions include three or more Participants competing for PIP execution.<sup>11</sup> BOX notes, however, that its market makers are the Participants most likely to compete with Initiating Participants for execution against customer orders. BOX believes the PIP provides an incentive for them to do so by

<sup>&</sup>lt;sup>8</sup> Less than one in every one thousand PIP orders was rejected for the period from January through September 2011.

<sup>&</sup>lt;sup>9</sup> All fourteen Participants responding to the survey indicated that reducing the PIP to 100 milliseconds would not impair their ability to participate in the BOX PIP.

<sup>&</sup>lt;sup>10</sup> Based on a sample of PIP transactions for the first and third Wednesday of each month, a total of more than 40 trading days, for the period from January 2010 through September 2011.

<sup>&</sup>lt;sup>11</sup> Based on a sample of PIP transactions for the first and third Wednesday of each month, a total of more than 40 trading days, for the period from January 2010 through September 2011.

quoting their best and most aggressive prices, inuring the benefit of price improvement directly to customer orders.

BOX believes that the information outlined above regarding PIP transactions and the feedback provided by BOX Participants provides substantial support for its assertion that reducing the PIP duration from one second to 100 milliseconds will continue to provide Participants with sufficient time to ensure competition for PIP Orders, and could provide customer orders with additional opportunities for price improvement.

With regard to the impact of this proposal on system capacity, BOX has analyzed its capacity and represents that it and the Options Price Reporting Authority ("OPRA") have the necessary systems capacity to handle the potential additional traffic associated with the additional transactions that may occur with the implementation of the proposed reduction in the PIP duration to 100 milliseconds. Additionally, the Exchange represents that its systems will be able to sufficiently maintain an audit trail for order and trade information with the reduction in the PIP duration.

Upon Commission approval of the proposal, and at least one week prior to implementation of the proposed rule change, BOX will issue an Informational Circular to Participants, informing them of the implementation date of the reduction of the PIP from one second to 100 milliseconds. This will give Participants an opportunity to make any necessary modifications to coincide with the implementation date. Finally, BOX notes that the proposed rule change will have no impact on provisions related to Auto Auction Orders in Chapter V, Section 14 of the BOX Trading Rules, nor how such orders function within the PIP.

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### 2. <u>Statutory Basis</u>

The Exchange believes that the proposal is consistent with the requirements of Section 6(b) of the Act,<sup>12</sup> in general, and Section 6(b)(5) of the Act,<sup>13</sup> in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism for a free and open market and a national market system and, in general, to protect investors and the public interest. BOX notes that exposure and allocation timers for the Chicago Board Options Exchange's Hybrid Agency Liaison ("HAL") and Simple Auction Liaison ("SAL") mechanisms, are both currently set at 150 milliseconds.<sup>14</sup> In particular, the proposed rule change will provide investors with more timely execution of their options orders, while ensuring that there is an adequate exposure of orders in the BOX PIP. Additionally, the proposed change will allow additional investors the opportunity to receive price improvement through the BOX PIP, and will reduce market risk for BOX Participants using the PIP. As such, BOX believes the proposed rule change would help perfect the mechanism for a free and open national market system, and generally help protect investors' and the public interest.

The Exchange believes the proposed rule change is not unfairly discriminatory because the PIP duration would be the same for all Participants. All Participants in the PIP have today, and will continue to have, an equal opportunity to receive the PIP Broadcast and respond with their best prices during the PIP. As noted above, based on the feedback BOX has received from its Participants, they will have, within 100 milliseconds, the opportunity to receive and respond to at least four iterations of PIP messages and compete for the customer order. Additionally,

<sup>&</sup>lt;sup>12</sup> 15 U.S.C. 78f(b).

<sup>&</sup>lt;sup>13</sup> 15 U.S.C. 78f(b)(5).

<sup>&</sup>lt;sup>14</sup> <u>See CBOE Regulatory Circular RG08-100, September 3, 2008.</u>

BOX believes the reduction in the PIP duration reduces the market risk for all PIP Participants. The reduction in time period reduces the market risk for the Initiating Participant as well as any Participant providing orders in response to a PIP Broadcast. Moreover, based on the responses BOX received to its survey of PIP Participants, BOX believes that a reduction in the PIP auction period to 100 milliseconds would not impair Participants' ability to compete in PIP transactions. BOX believes these results support the assertion that a reduction in the PIP duration would not be unfairly discriminatory and would benefit investors.

#### B. <u>Self-Regulatory Organization's Statement on Burden on Competition</u>

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

## C. <u>Self-Regulatory Organization's Statement on Comments on the Proposed Rule</u> <u>Change Received from Members, Participants, or Others</u>

The Exchange has neither solicited nor received comments on the proposed rule change.

## III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the <u>Federal Register</u> or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission will:

A. by order approve or disapprove such proposed rule change, or

B. institute proceedings to determine whether the proposed rule change should be disapproved.

## IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

#### Electronic Comments

- Use the Commission's Internet comment form (<u>http://www.sec.gov/rules/sro.shtml</u>); or
- Send an e-mail to <u>rule-comments@sec.gov</u>. Please include File Number SR-BX-2011-084 on the subject line.

#### Paper Comments

• Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR–BX–2011-084. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, on official business days between the hours of 10 a.m. and 3 p.m., located at 100 F Street, NE, Washington, DC 20549. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change;

the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BX–2011-084 and should be submitted on or before [date 21 days from publication in the <u>Federal Register</u>].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>15</sup>

Kevin M. O'Neill, Deputy Secretary

<sup>&</sup>lt;sup>15</sup> 17 CFR 200.30-3(a)(12).